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INTERNATIONAL PRELIMINARY EXAMINATION REPORT PCT (PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 107513/HNY	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/NO 03/00109	International filing date (day/month/year) 04.04.2003	Priority date (day/month/year) 04.04.2002
International Patent Classification (IPC) or both national classification and IPC A61K9/48		
Applicant FMC BIOPOLYMER AS et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 21.10.2003	Date of completion of this report 27.04.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Sindel, U Telephone No. +49 89 2399-7064 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/NO 03/00109**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-37 as originally filed

Claims, Numbers

1-62 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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EXAMINATION REPORT**

International application No. **PCT/NO 03/00109**

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-62
	No: Claims	
Inventive step (IS)	Yes: Claims	1-62
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-62
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/NO03/00109

Item V

1) Novelty

The subject matter of claims 1-62 seems to be new in the sense of Article 33(2) PCT in the view of the present prior art.

2) Inventive step

The subject matter of claims 1-62 seems to involve an inventive step in the sense of Article 33(3) PCT.

The problem to be solved in the present application is the provision of an alternative method for the preparation of stable robust seamless capsules of polysaccharide gel membranes.

The solution provided is a process comprising the steps of preparing an emulsion containing water, an emulsifier, monovalent and/or polyvalent metal salts, large amounts of oil and no marmelo mucilage, adding drops of this emulsion to an aqueous gelling bath of ionic polysaccharides and drying the resulting capsules.

Closest prior art is D1 (US 5 942 266) describing a capsule comprising in an alginate shell a composition comprising marmelo mucilago, water, an oleaginous substance like vegetable oil, a water-soluble polyvalent metal salt and sodium chloride (see claim 1). The capsule is made by contacting liquid drops of the composition with an aqueous solution of an alginate (see claim 3). The resulting capsules are subjected to aqueous rinse, pH adjustment and stored in wetted condition (see column 6, lines 48-56). It is pointed out that marmelo mucilage is absolute necessary for this formulation in order to be able to entrap a large amount of oil (see column 5, lines 9- 15 and column 6, lines 20-25). There is no hint given that the capsule could be made without the use of marmelo mucilago. Hence, the subject matter of present claims 1-62 involves an inventive step.

3) Industrial applicability

The subject matter of claims 1-62 is industrially applicable in the sense of Article 33(4) PCT.